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## Preliminary Announcement

### Call for Papers

# 2020 IERE - CSIRO Brisbane Hydrogen Workshop **Hydrogen: Enabling the Clean Energy Transition**



The Story Bridge in Brisbane, QLD - Australia.

June 9 - 12, 2020

Brisbane, Australia

Organized by IERE and CSIRO



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## **Hydrogen: Enabling the Clean Energy Transition**

### ***About the theme***

The world is seeking technological pathways to support the decarbonisation of electricity, transport, and industrial sectors. Hydrogen has emerged as a real opportunity in this context: it can be used as a transport fuel, as a long-term energy storage medium, and as a vector for distribution of renewable energy from those countries with significant resources to those with fewer resources. While hydrogen can play a role in supporting electricity grids with greater penetration of variable renewable energy it also offers the opportunity for the electricity sector to be coupled more closely with transport and industry to support significant decarbonisation around the globe.

### ***Who should attend?***

The workshop is intended for experts actively involved in the selected themes, from IERE members and non-members, as well as all those interested in the evolution of the electrical power industry and the technology development and business development opportunities associated to this evolution. IERE will invite prominent speakers for keynote speeches.

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## Outline Schedule:

|           |                 |  |
|-----------|-----------------|--|
| Tuesday   | – June 9, 2020  | Welcome Reception  |
| Wednesday | – June 10, 2020 | 2020 IERE-CSIRO Brisbane Hydrogen Workshop (Day 1)<br>Official Dinner          |
| Thursday  | – June 11, 2020 | 2020 IERE-CSIRO Brisbane Hydrogen Workshop (Day 2),<br>Social Event (Optional) |
| Friday    | – June 12, 2020 | Technical Visit (Optional)   |

## General Theme: Hydrogen Enabling the Clean Energy Transition

### Session 1: Transport and Mobility

Fuel-cell electric vehicles are perhaps the highest-profile aspect of a hydrogen energy system, yet small-scale mobility is just a small part of the broader opportunity for decarbonising transport sectors, which includes buses, trucks, ships, and trains—and potentially aircraft. While the cost of (gas-derived) hydrogen for mobility is approaching that of traditional fuels, there are still reductions needed in costs of renewable hydrogen as well as demonstrations of mobility solutions and investment in refueling infrastructure.

Potential topics include:

1. Refuelling, including compression and safety
2. Infrastructure
3. Demonstration projects
4. New technologies and approaches

### Session 2: Carriers for Storage and Distribution

One of the more challenges aspects of establishing large-scale hydrogen energy value chains is the cost and efficiency of hydrogen storage and transport. This session will explore technological solutions for storage of hydrogen at various scales and applications, such as for grid stabilisation, seasonal energy storage, or long-distance transportation.

Potential topics include:

1. Liquid hydrogen
2. Ammonia
3. LOHCs
4. Carbon-based carriers, including CO<sub>2</sub> utilisation approaches
5. Technoeconomic and life-cycle modelling of different scenarios

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### **Session 3: Electricity**

Hydrogen energy systems, in particular those based on electrolysis, have an important role to play in stabilising and decarbonising electricity networks. Electrolysers are a fast-response load, and when coupled with storage and generation systems, can support high penetration of intermittent renewables and long-term storage. Hydrogen energy systems are also well-suited to remote and off-grid applications. This session will explore technologies and applications for hydrogen in the electricity sector.

Potential topics include:

1. Hydrogen for grid services
2. Remote and off-grid applications and solutions
3. Hybrid energy and storage systems
4. Modelling to support location and scale selection

### **Session 4: Sector Coupling Opportunities**

A feature of the emergence of hydrogen energy systems is the diversity of potential application pathways and industrial sectors. Commonly described as ‘power-to-X’, there are also opportunities for industrial sectors not traditionally associated with hydrogen to play a role in production (such as the waste sector) or utilization for decarbonization (such as agriculture). This session will explore the different ways that various industry sectors can come together to both support ‘hydrogen at scale’ as well as decarbonization of industries such as metals production.

Potential topics include:

1. Renewable and low-carbon gas
2. Opportunities for decarbonising metals production
3. Waste and biomass pathways for hydrogen production and utilisation
4. Hybrid systems and modelling approaches

### **Panel Session**

Details to be announced

### **Special Session**

IERE Activity Report "IERE Hydrogen Initiatives" (Tentative)

### **Poster Session**

Details to be announced

### **Exhibition**

Details to be announced

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## Program

Session structure and speakers are subject to change according to the submission of contributions.

## Call for Papers

<<**Abstract Submission: No later than March 4, 2020**>>

You are kindly invited to submit abstracts for the Oral Session or Poster Session for the 2020 Brisbane Hydrogen Workshop by e-mail by March 4, 2020

to: **register (at) iere.jp** [Please substitute “ (at) ” with “@”]

IERE Central Office

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As for the **format of the abstract**, please refer to “Events” page on IERE website.

<https://www.iere.jp/events/workshop/2020-brisbane/forspeakers.html>

- Abstract is uploaded to IERE’s website and open to the public after the workshop.
- The medium of communication is English.

## Registration

*Detailed information on Registration will be announced in the First and Second Announcements, which will be delivered later.*

## Registration Fee

The Registration fee will be informed later. Registration fee will cover attendance for the conference, reception/cocktail, Lunch and Dinner, conference package.

- The expected Registration fee is **400-600 USD** for IERE members, **600-900 USD** for IERE non-members and **300-450 USD** for academia.

*Details including cancellation policy will be announced in the First and Second Announcements.*

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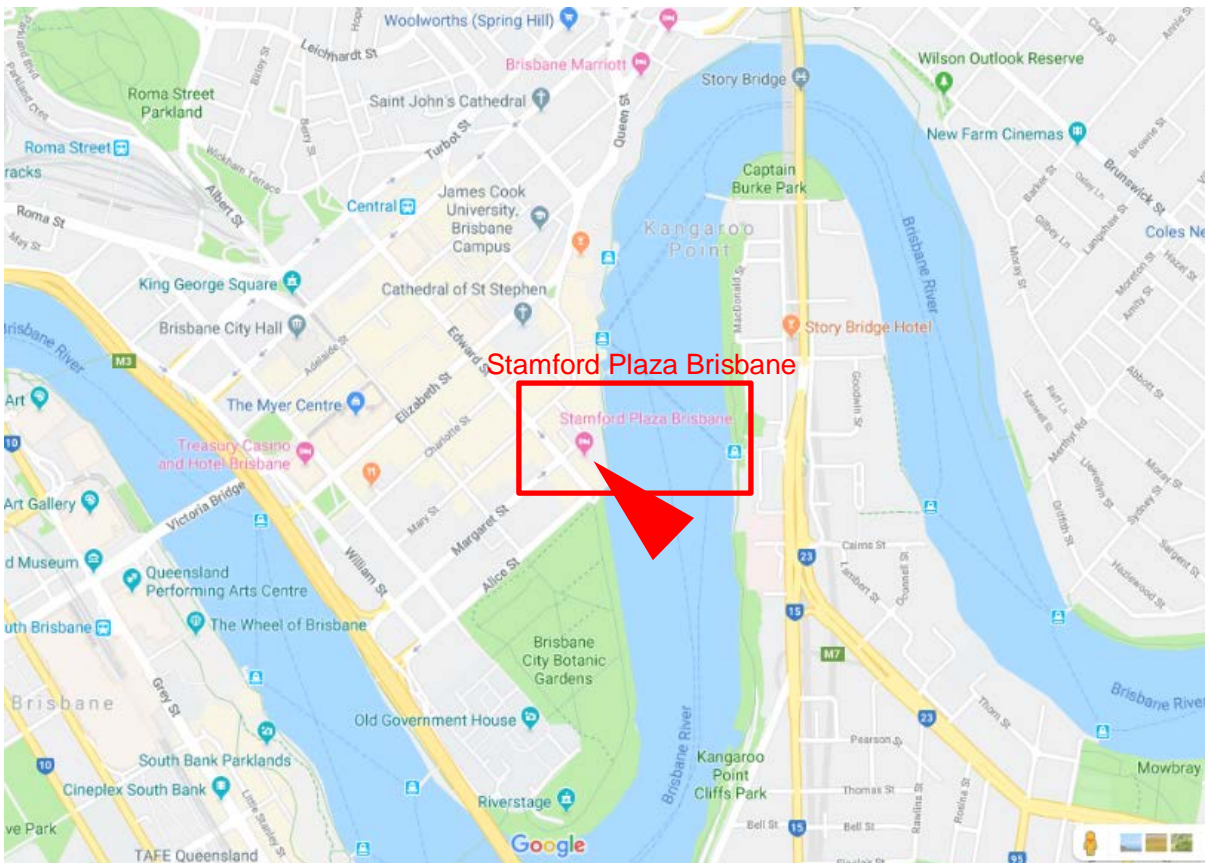
## Conference Venue & Accommodations

Stamford Plaza Brisbane, Queensland

Location: Edward St, Brisbane City, Queensland, Australia

Website: <https://www.stamford.com.au/spb>





<https://goo.gl/maps/3kW4xkBeBaYD7eXz6>

Rooms at special rates will be prepared for conference participants.

The expected Room Charge will be around 240 AUD (Approximately 160 USD\*)

\*Calculate the exchange rate 10 USD in 15 AUD



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## About CSIRO

CSIRO is Australia's national science agency, undertaking research in support of Australian industry and the wider community. CSIRO's purpose is to solve the greatest challenges through innovative science and technology. This is done through our impact science lines of business: Agriculture and Food, Health and Biosecurity, Data61, Energy, Land and Water, Manufacturing, Mineral Resources, and Oceans and Atmosphere, as well as through our National Facilities and Collections lines of business where we manage infrastructure and biological collections for the benefit of research and industry. CSIRO maintains more than 50 sites across Australia and in France, Chile and the United States, employing about 5500 people. We collaborate with research institutes from around the world, and we partner with industry to solve problems and commercialize new technologies.

CSIRO's Energy research is supporting a transition to a net zero emissions energy future. We do this by focusing on new and emerging renewable energy technologies, including hydrogen energy systems, while supporting the use of gas as a key transition fuel. We develop technologies to help our electricity grid evolve to support these low emissions technologies, and we explore the environmental and economic implications of the energy transition.

[www.csiro.au](http://www.csiro.au)

## About IERE

IERE is an organization for exchanging electricity and energy related cutting-edge technologies and R&D information among its members from the electricity & energy supply industry, equipment provider businesses, academic research, government, etc. This unique platform is of great help for executives, senior managers, engineers, and researchers who are responsible for R&D and solutions. It is a worldwide, non-profit organization, established as "International Electric Research Exchange" in 1968.





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